

INTRODUCTION

The role of methodology in semiotic theory building

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What are the criteria for a well-built scientific theory? Each scientific field incorporates four levels of operations. The first level is that of *epistemology*, the integration, explicit and conscious or implicit and empirical, of any theory into one of the larger paradigms marking a historical period. The second level, *theory*, is founded on this paradigm and defines the key concepts and axes of investigation of the field. From theory follows in a systematic manner the third level, *methodology*, which allows research to proceed to concrete operations on the basis of the framework installed by theory. Finally, *techniques* follow from methodology or are articulated with it in a systematic manner, and give their final form to the above operations. *Only then* is it possible to formulate concrete results; only with this level is the value of a theory demonstrated. Debates are possible about the level of theory, and their outcome may be more or less convincing, but this is only intellectually rewarding. The final value of a theory follows from its completeness on all four levels, whence its capacity to respond in a satisfactory manner to the data selected and lead to reliable empirical results.

The French structuralist and semiotic explosion of the sixties and seventies, together with its rediscovery of the East European tradition and related tendencies such as the Tartu-Moscow School, introduced semiotics into a wide spectrum of disciplines, from anthropology to the humanities and the arts. Almost simultaneously began the diffusion of Peircean semiotics and the emergence of zoosemiotics, later expanded to biosemiotics and global semiotics. Then came poststructuralism and postmodernism, both of which have been extremely influential in the last 40 years; like classical structuralism, they were diffused throughout the humanities and the arts and even more widely in the social sciences. More recently, we have had social semiotics, cognitive semiotics, and existential semiotics.

This impressive diffusion was not without negative effects for semiotics (as Eero Tarasti also notes in his review article in this issue). While semiotics revitalised the multiplicity of fields with which it came into contact, it was also frequently absorbed by their traditional habits. Semiotic

terminology became part of their everyday vocabulary, but in a rather imprecise manner, thus losing its systematic character. While the French tradition keeps semiotics within the cultural domain, zoosemiotics, biosemiotics and cognitive semiotics extend it to or found it on biology. Thus, the domain of semiotics is today an evolving, splitting and conflicting kaleidoscopic domain. There is little communication between these different and heterogeneous tendencies. In addition, many researchers make eclectic choices from irreconcilable paradigms, adding to the confusion in the field. Last but not least, all of the conflicting theories are not well formed, since they have not all developed all four levels of the scientific enterprise. A decisive step for the operational use of a theory is, as we stated above, that it is able to move beyond the endorsement of an epistemological background and the adoption of theoretical principles to the formulation of an explicit and systematic methodology, able to generate or be articulated with specific techniques.

This is the reason why the present issue of *Punctum* focuses on methodology. It does not aspire to any synthesis, since this does not seem possible under current conditions. But the editors feel that the explicit formulation, by the different approaches competing in the semiotic sphere, of the manner in which they deal with the basic requirements of theory-building represents a step towards a better mutual understanding of both differences and possible partial convergences, links or bridges.

The introduction that follows attempts to participate in the debate we hope will be generated by the papers included in the issue, by pointing out their different rationales, convergences and divergences, and additional issues relevant to the discussion.

Katre Pärn's paper moves on a sophisticated epistemological level and aims to define both the epistemological status of semiotics and its core methodology. Methodology is, for Pärn, the key factor in determining the position of a discipline in the system of the sciences. She opposes the narrow view of science derived from the natural sciences, which leads to the relegation of the study of culture and society to the status of non-scientific disciplines, and points out that that this division revolves around methodology ('science' is that which follows 'scientific' methodology). She also opposes the view that the natural sciences use a nomothetic approach, while the humanities, labelled 'non-scientific' disciplines, use an idiographic approach, noting that this has not been the case historically. There are, in fact, many instances of the use of a nomothetic approach outside the natural sciences, as we can see from the linguistics of Ferdinand de Saussure and Noam Chomsky, as well as the narrative theory of Algirdas Julien Greimas.¹

Pärn is critical of the view that the theories of the natural sciences are of a different nature from those of the humanities and social sciences. She attributes the difference between the two domains in the last instance to the different nature of their objects. She recognizes that the natural sciences attempt to provide a representation of reality, even if their 'adequacy as true representation is uncertain',² but, following Paul Ricoeur, she argues that the humanities

not only have their own mode of reference to the world, but also express the self-reflection of a subject's being-in-the-world. The specificity of the humanities lies in the fact that they use theory as methodology; ideally, a concept-based methodology aiming not at interpretation, but analysis through modelling.

Pärn makes an important observation, namely that 'the humanities study culture and are themselves part of culture'. This is a central position of the Tartu-Moscow School, which has a two-level conception of the model, culture-as-model and the modelling of this model. This school differentiates natural language, the 'primary modelling system', from the cultural systems based on natural language, the 'secondary modelling systems'. Culture as a semiotic object is based in the last instance on language and the secondary modelling systems are built on it, either directly, as in literature, or in a parallel manner, as in music and painting. The two-level conception of the model follows from the idea that there are two points of view on culture: the internal approach, the point of view of the culture itself, and the external approach. The second is a scientific metasystem, a metalanguage describing culture, though it does not escape cultural determination (Uspenskij *et al.* 2003: theses 1.1.0, 1.1.1, 3.2.1, 6.1.3, 6.1.5, 9.1.0).

This two-part classification is related to Hjelmslev's (1961: 114, 120, 123, 125) more complex three-part hierarchical classification of all systems of meaning; Hjelmslev's two lower levels coincide with the two levels of the Tartu-Moscow School. For the purposes of the study of signification, Hjelmslev refers to cultural systems when they are objects of semiotic analysis as 'non-scientific semiotics' and to the metalanguage analysing these semiotics as 'semiology'. There are also other fields that *do not* study signification, but they are, of course, still semiotic. Thus, caution is needed in the use of the term 'semiotic', because any human manifestation is semiotic. Given the above, Pärn's statement that 'models are by definition semiotic structures' is of course correct, but does not imply that all models study signification.

Pärn argues that theories, as systems of concepts, are models and considers the model as a representation; she adds that models need not be mirror-type representations, but 'creative' modelling. The concept of 'representation' thus does not characterise only the natural sciences, but is considered as a general trait of all scientific models. This is why Pärn considers the distinction between 'representational' and 'interpretive' theories as misleading.

A model, for Pärn, represents the structure of its object and the relation between the two is mediated by rules or conventions. This view is in line with the current definition of models in the physical and social sciences:

... models are *structured*, in the sense that the selected significant aspects of the 'web of reality' are exploited in terms of their connection.... what is often termed a model by logicians is called by econometricians a 'structure'... Science has profited greatly from this *pattern seeking*, in which phenomena are viewed in terms of a kind of organic relationship (Chorley and Haggett 1967: 23).

Pärn then goes on to consider the use of metaphorical modelling, ie. the borrowing of an idea, concept or theory from one scientific field for use in another field. She considers that metaphors are not necessarily rhetorical and vague, but can be vehicles of greater complexity than literal concepts, and recommends metaphorical modelling as a dynamic mode of knowledge in the form of a scientific, analytical activity.³ She discusses two different versions of the 'metaphor career hypothesis', used in both the natural sciences and the humanities: one considering that the travelling of a concept as a metaphor from one field to another results in a gradual conventionalisation such that it loses its metaphorical nature, the other believing that it remains a living metaphor.

Pärn finishes her paper by investigating the role of metaphorical modelling for the constitution of semiotics. She notes that metaphorical modelling has had a double function: semiotics has used metaphorical models borrowed from other fields, but concepts have also travelled as metaphors internally within semiotics from the social to the biological domain (in this second case, she points out that the unification thus achieved could be due just to the level of abstraction of the metaphorical model used). Pärn points to the use of mathematics and formal linguistics by semiotics as examples of metaphorical borrowing.⁴

Of particular interest is Pärn's discussion of the difference between the narrow linguistic and linguistico-mathematical approaches to semiotics, and the fertility of a more metaphorical language-oriented approach; she gives as example Christian Metz's efforts to define a 'language of cinema', as contrasted with the more metaphorical use of the notion of cinematic language in film studies today. However, while metaphor seems to be more fertile and interesting as a methodology than the construction of more formal semiotic models, such an approach blurs the distinction between semiotics and other generally postmodern approaches, and thus relativises its position in cultural theory.

Linguistics was indeed the original model science for semiology, and it is thus interesting to see the use that Paolo Fabbri makes of the linguistic model in his analysis of the 'Springtime Meal of the Word-in-Liberty' by the Italian Futurist Filippo Tommaso Marinetti. The concept of metaphor is also central to Fabbri's paper, because the text he analyses is itself overtly metaphorical, 'deconstructing' cooking and dining just as the Futurists deconstructed all the semiotic systems they worked in, including – most spectacularly – natural language.

The Italian Futurists were an avant-garde artistic movement founded by Marinetti in 1909; shortly thereafter it inspired the parallel movement of Russian Futurism. The Futurists were active in practically every medium of art: literature and theatre; painting, sculpture, ceramics, industrial design and graphics; interior design, architecture and urban design; music, film, fashion and textiles. They rejected tradition and good taste, and were fascinated with the dynamism of modern machines, such as the aeroplane and the industrial city. Much of Futurist art is preoccupied with dynamic motion. Marinetti remained the principal theoretician of the movement until his death in 1944, when the movement itself also faded.

To describe the Futurist style of poetry, Marinetti coined the term *parole in libertà* (words in liberty) or *parolibere* (free words); both expressions could perhaps also be translated as 'liberated words'. The words are to be liberated from all forms of syntax, punctuation and meter. *La cucina futuristica*, Marinetti's and Fillia's 1932 book on Futurist cuisine in which the 'formula' for the 'Springtime Meal of the Word-in-Liberty' is to be found, is among other things an application of these Futurist principles to the art of cooking and dining.

Modern interest in the Italian Futurists has been overshadowed, Fabbri points out, by Marinetti's political involvement with Fascism during the 1920s and 1930s. He feels, however, that their ideas are of special interest to semioticians, and indeed that semiotics has a particular contribution to make to the understanding of the Futurist project.

Fabbri's method is in a sense the oldest, best established of all the semiotic methodologies: a scrupulously careful reading of the text itself, its language and structure. Fabbri himself uses the metaphor of the microscope to describe his method of analysis. However, he also pays attention to what the text is *saying*, which in this case leads him to a detailed analysis of the Futurist theory of language and its relation to the linguistics of the early 20th century.

It is fascinating to discover, in Fabbri's paper, the astonishingly close relationship between semiotics and the early 20th-century artistic avant-garde as represented by the Futurists. The Futurists are proto-semioticians: they treat all the expressive media in which they work as sign systems analogous to natural language. Thus, Futurist linguistics is not only about poetry; for them, language is a metaphor for all social conventions, including in this case cooking and dining. The same principles of absolute freedom from constraints, of rejection of traditional forms and conventions, which they advocated for language, were to be applied to all art. Because the Futurists themselves worked in virtually all art forms, Futurism is indeed, as Fabbri puts it, a semio-liberating movement, a movement to free all sign systems from the constraints of convention. This feeling that one cannot say new things while using an old 'language' – traditional forms of expression – is shared by practically all the 20th-century avant-gardes (a point that informs the paper by Rea Walldén in the present volume). Because semiotics also considers all forms of human communication and art as sign systems ultimately analogous to verbal language, Fabbri's semiotic approach has a significant contribution to make to our understanding of the Futurist project, and perhaps also to the history of our own scientific endeavour.

Another central concept discussed by Pärn, 'representation', is the nucleus of the paper by Raúl Gisbert Cantó. His use of Peircean theory is founded on Peirce's best known and most widely used sign typology, that of icon, index and symbol, which depends on the way in which a sign denotes its object.

In Peirce's hierarchy of sciences, the top position is occupied by mathematics; then follows philosophy, the first part of which is 'phenomenology', followed hierarchically by 'semiotic', also part of philosophy and equated with *logic*.⁵ The object of phenomenology, which takes the form of a mathematical logic of relations, is the definition of the universal principles of

experience, that is, of the categories that allow in turn the formulation, in terms of Peirce's semiotic, of the foundation of all kinds of experiences and knowledge, the sign. Peirce founds these principles on the Kantian categories and postulates three categories, which correspond to three different modes of approaching phenomenal entities: *firstness*, considering them in their property of having 'monadic', non-relational, qualities; *secondness*, approaching them as involving a dyadic relationship, in which case each term of the relation has monadic properties; and *thirdness*, seeing them as terms of a triadic relationship, so that dyadic relationships exist between each couple of terms. These phenomenological principles lead, for Peirce, to the constitution of the sign and allow semiotic to formulate all possible types of signs.

The sign for Peirce, that is, whatever conveys meaning, implies a triadic relational structure, which for him is the only relationship that incorporates all three categories. The first term of this relationship, the *representamen* ('sign' in the narrow sense), stands in some manner for something else, its 'object',⁶ which is the second term of the relationship, in such a way that it brings about a response to it, namely the idea it provokes or the interpretation of its meaning by an interpreter, its *interpretant*, which is the third term of the relationship and stands in the same relationship to this object as the *representamen*. This triadic relationship, the sign, is a 'representation'. According to Peirce, the very definition of the *representamen* implies its naming by another *representamen* and this one attracts its own *interpretant* and so on, opening a chain of theoretically *unlimited semiosis*,

Peirce proposes two groups of interrelated classifications of signs. The first group follows from the application of the three universal categories to each term of the triadic sign. The trichotomy into *qualisign*, *sinsign* and *legisign*, which, for Peirce, is the simplest, follows from the application of the categories to the *representamen*. The second trichotomy is the one into *icon*, *index* and *symbol*, and follows from the application of the categories to the object. The third trichotomy, which is the most complex, follows from their application to the *interpretant* and leads to three possible types of *interpretants*, *rheme* (which stands as its object for some purpose), *dicent sign* (which is intended to have some compulsive effect on the interpreter of it) and *argument* (which represents its object in respect of law or habit).

The second group of classifications derives from the relation of these three trichotomies according to a tree-structure – see Fig. 1 (Peirce 1932, vol. I: § 300-353 and vol. II: § 228, 233-264, 303-308; see also Pape 1998; Sebeok 1994, vol. 2: Peirce, Charles Sanders (1839-1914); Eco 1976: 68-69).⁷

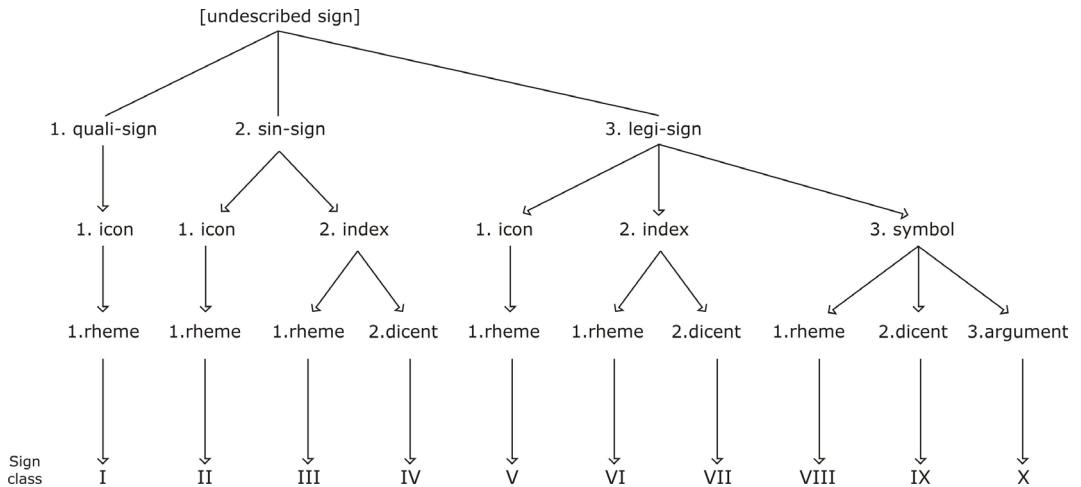


Figure 1. The classification of signs according to Peirce.

Any tree-structure typology defines pure independent types, ie, types that are mutually exclusive. However, Peirce states that ‘it would be difficult if not impossible, to instance an absolutely pure index, or to find any sign absolutely devoid of the indexical quality’ (Peirce 1932, vol. II: § 305). It may be this observation that led him to repeatedly reformulate his typology.

Cantó’s paper wants to be a Peircean contribution to adaptation theory. He focuses on cross-media adaptation, namely adaptation from comic books to the cinema, and in particular on characters created by the two major American comic book publishers, Marvel Comics and DC Comics, who have extended their activities to film production.

Using what he considers as Peircean visual semiotics, Cantó examines the signs involved in the depiction, in both comic books and their cinema adaptations, of the urban environment and the heroes’ emblems, costumes and facial features. He focuses on the identification of the types of signs belonging to Peirce’s second trichotomy, icon, index and symbol, and his findings are an opportunity for a fruitful discussion of the implications of applying this typology. The reason is that Peirce formulated an abstract, *context-free* typology of signs, while the object of Cantó’s analysis is much more complex, because it refers to signs inside *texts*, and in addition is *intertextual*. Cantó indicates, for example, that the Superman emblem with a capital S and the bat of Batman are symbols of these superheroes and of their nature, both in the comic books and the cinema, that the costumes of the superheroes are also symbols of them, or that, in the case of Ironman, the light, bright colours and blue sky of the representation of New York convey the meaning of peace, tranquility and a safe city. These identifications are in line with Peirce’s definition of the symbol as ruled by habit, that is, a set of associations, and denoting due to its interpretant.

Cantó connects icon to visual similarity, and in fact this is in general the case with the

material he analyses. However, we should recall that an icon *resembles* or *imitates* its object; thus Peirce considers as icons not only images, but also diagrams based on analogy and metaphors. Cantó gives as examples of an icon the representation of a real city, a frame in a film that adapts a vignette from a comic book or, more specifically, the Gothic style architecture of Gotham city in Batman's cinematic adventures, adapting its form from the comic books. We detect here two different modes of iconic rendering: the one connects the icon with actual *physical* space, while the other is *intertextual*, connecting one medium with another. In the one case the 'object' is physical, in the other it is conceptual. Both cases, though quite different, conform to Peirce's definition.

The index is not frequently mentioned, and this for good reason. Cantó gives the definition of the index as a sign that links two physical objects, and this is true: Peirce refers to a 'dynamical (including spatial) connection'. However, his definition of index should be understood in a wider sense, because it includes, for example, certain grammatical categories, ordinary letters used in algebra, the letters A,B,C, etc. accompanying a geometrical figure or a label on a diagram.⁸ According to him, 'psychologically, the action of indices depends upon association of contiguity'. In the case of matter of facts, he states that:

No matter of fact can be stated without the use of some sign serving as an index. If A says to B, 'There is fire', B will ask, 'Where?' Thereupon A is forced to use an index.... If A points his finger to the fire, his finger is dynamically connected with the fire ... If A's reply is, 'Within a thousand yards from here', the word 'here' is an index; for it has precisely the same force as if he had pointed energetically to the ground between him and B. (Peirce 1932, vol. II: § 305)

Cantó gives the Bat-signal as an example of an indexical sign, because he considers that an index links two physical objects and the Bat-signal is linked to the fact that someone is in danger in Gotham city and needs the help of Batman. He connects the Bat-signal, which is a symbol, with a social situation (danger, help), which is a very wide interpretation of an indexical relation. On the other hand, let us suppose that inside a text – comic book, cinematographic or other – smoke is depicted, the source of which is not visible, because it is hidden by trees. In real life we would here have the cause-and-effect aspect of the index, but this does not hold for a text, because smoke and fire in a text are no longer physical entities. Thus, the use of 'index' for this case would be purely *metaphorical*.

We saw that Peirce's types are exclusive of each other, but according to Cantó, the S of Superman or the bat of Batman is a symbol in the comic book or the cinema, while it is an icon with reference to the adaptation from comic book to cinema. Is this, then, an infringement of the exclusivity of the type?⁹ We do not believe that this is the case, because each identification results from a different viewpoint: the first concerns the sign as *part of a text*,

the second follows from an *intertextual* comparison. The relation of each sign to its object in its own textual context is different from the relation of the signs to each other in the inter-media adaptation.

The methodology used by Cantó exemplifies the usual Peircean approach to textual analysis. It generally consists in analyzing a text through the identification of the isolated types of its signs, that is, the types as theoretical concepts are used simultaneously as methodological, and largely technical, guides during the analysis. Peirce does not advance beyond the individual sign: both the *dicent sign* and the *argument* are, for him, signs and his theory is not preoccupied with the internal relationships of their elements. This leads any attempt at textual analysis to an additive operation, without the possibility of having access to the *structure* of a text.

A different use of Peircean theory is exemplified by the book *Cultural Implications of Biosemiotics* by Paul Copley, reviewed at the end of this issue. Central to Copley's book is Jakob von Uexküll's concept of '*Umwelt*', which is a form of modelling of its environment by an organism as a function of its biological capacity.

The theoretical background of biosemiotics is Thomas Sebeok's combination of Peirce with von Uexküll's *Umwelt*, a synthesis which was first presented in a working paper (no. 5) of the Toronto Semiotic Circle distributed to the participants of the 3rd Congress of the International Association for Semiotic Studies (Palermo, 1984) and later published as Anderson *et al.* 1984. This manifesto proposes a holistic, 'ecumenical' semiotics, with the ambition of unifying the social sciences and humanities with the biological sciences, the dream of logical positivism.¹⁰ For Sebeok, semiosis coincides with life. Biosemiotics studies all kinds of natural processes in all living organisms, from the cellular molecular processes to the level of the organism as a whole. It is this last level that interests Copley, since this is where the concept of *Umwelt* becomes relevant.

Two interrelated issues are raised by biosemiotics. The first issue concerns terminology: what do we mean by semiosis? If we mean any form of transmission of information at any organic level, this would lead us to define semiosis as coincidental with life, which for Sebeok it is. This is very far from the understanding of semiosis as the ability to produce and use sign systems. The second concerns the relationship between humans and other biological organisms. After Darwin, it is a truism that humans are animals, yet it is also clear that they are in important ways different from other animals. Since one major difference between humans and other animals is that humans use language, what exactly do we mean by language? Clearly, it is unlikely that we will be able to resolve these issues here, but we shall try to be clear about our use of terminology.

Copley uses the term 'semiosis' in Sebeok's sense and insists on the continuity between all living organisms, but he is also explicit on the discontinuity between humans and simpler life-forms, a discontinuity which he attributes to the co-evolution of brain, language and culture. Humans are of course 'organisms', but they have been transformed through culture into

social subjects. John Deely, who like Sebeok is frequently cited by Copley, writes on the human *Umwelt*, which for him becomes a linguistic *Lebenswelt*:

Thus the objective [ie. consisting of 'objects'] world of human beings, the human *Umwelt*, is unique among all the species-specific *Umwelts* of other animals in being singularly malleable – transcendent to biology.... The human animal is *like* all other animals in living in an actual objective world or *Umwelt*; but the human animal is *unlike* all other animals (at least on this planet) in that its actual objective world admits of an indefinite number of alternative possibilities some of which can be actualized in turn. Thus human society is not only, like every society of animals, hierarchical; this hierarchy is *civil* as well, in that it can be embodied in different patterns of government.... (Deely 2001: 8-10)

Copley also follows Deely on the issue of reality. As Copley mentions, Deely differentiates between 'objects' and 'things' in relation to the *Umwelt*. 'Things' are mind-independent elements of the physical environment (which he confusingly calls 'subjective') and exist beyond the *Umwelt*, which is the 'objective' environment as a network of relations, a 'semiotic web' modelling the world. Things either are or are not known by a knower, while objects exist only in relation to a knower, a 'cognizing organism', being self-representative and thus opposed to the sign as other-representative; things that are known are both things and objects. Deely attributes to the *Umwelt*, which he considers as relatively independent from the physical environment and as the 'totality of objectification [ie. of objects] ... being grasped in itself', the quality of Firstness. Objects are 'semiotised', things are not.

The concept of 'things' poses the issue of the reality of 'reality'. The thing, for Deely as for Copley, is not an ontological entity, a 'thing-in-itself' in Kantian terminology, but has an existence different from the relation through which it is known. For Copley, the idea of *Umwelt* leads to the conclusion that reality is inaccessible as such, because it is necessarily conceived through *Umwelt*; but he also believes that the human *Umwelt* cannot be entirely out of contact with reality, since otherwise humans would not be able to survive.

Deely holds a view of *Umwelt* as the product of sensation (perception) as well as understanding, which is the possibility of going beyond sensation and perception to consider objects as such, in this hierarchical order from the simpler to the more complex; sensation is the medium through which the physical environment is partially included within the *Umwelt* (Deely 2001: for example, 5-6, 8 note 7, 8-10, 356, 379, 384, 448, 558-559, 585, 647, 696-697, 944).

Thus, Deely's view of *Umwelt* is static, presupposing an immobile observer passively perceiving its *Umwelt*. However, the relation of the organism to its environment is dynamic and the *Umwelt* is the result of the interaction of the organism with the constraints of its environment. This is an important factor, as will be seen below.

The co-evolution of brain, language and culture, what Copley calls the 'difference in degree' that became a 'difference in kind' between humans and other organisms, had of course been suggested before the arrival of biosemiotics. According to André Leroi-Gourhan, phylogenetically, the fundamental criteria of humanity are the co-evolution of the liberation of the hand during locomotion; the vertical position, which caused a neuro-psychic development of the human brain different from a simple increase in volume; the development of language; and movable tools. He differentiates between the physical ability to organise sounds or expressive gestures and the intellectual ability to conceive expressive symbols transformable to sounds and gestures. Thus, Leroi-Gourhan envisages the possibility of 'intelligent' expression without the use of symbols (semiosis in the cultural sense). He attributes intelligence already to the *Australopithecus species*, due to the combination of technical progress and language, and observes that the result was '*un langage de niveau correspondant à celui de leurs outils*' (163); as for the Neanderthals, he believes that their language probably did not differ much from our own (Leroi-Gourhan 1964: 33-34, 126-127, 162-165).

A very similar position as concerns the ontogenetic development of humans has been proposed by Jean Piaget. According to his constructivist approach (which he called 'genetic structuralism'), human mental structures are the result of the passage from simpler to more complex structures such that the superior structure is derived from the inferior through transformation, but the superior also enriches the inferior by integrating it. It seems to us that Copley's concept of 'nesting' intends to express this complex process. The point of departure of the cognitive structures is, for Piaget, the general coordination of actions, that is, *sensory-motor* coordination, which appears *before* language. Before this function develops, there is no differentiation between subject and object and there is centration on the body. There is no consciousness of the existence of the schemes of the sensory-motor intelligence and these are not yet concepts, due to the lack of a semiotic apparatus. Thus, the semiotic function implies conceptual structures which emerge from certain connections of the sensory-motor schemes. We see that this sensory-motor intelligence *could be misunderstood as semiosis*, which for Piaget only appears in the human child (at the age of 18-24 months) and certain higher primates. The development of semiosis in this sense is due to social life, the progress of preverbal intelligence and the internalisation of imitation leading to representations. Piaget finds an amazing parallelism between the psychogenesis and biogenesis of the cognitive tools (Piaget 1968: 53-56, 1970: 24, 102 and 1972: 15, 18, 23, 102).¹¹

Copley also raises the issue of ethics. The book review expresses strong doubts about the possibility of anchoring ethics in biology with the aim of offering a more solid basis for it than what Copley calls 'voluntarism'. Ethics is deeply culture-specific. However, since the publication of *The Limits to Growth* (Meadows *et al.* 1972), an attempt has been made to formulate a kind of universal ethics which would not be based on voluntarism, though this ethics finds its foundations not in biological mechanisms but in the cultural values of environmentalism, with

its corollary of sustainability and sustainable development. Contrary to the limited radius of semiotics, environmentalism is institutionalised on a very high and universal level.

There is an interesting antecedent to this ideology. Martin Heidegger rejects humanism and existentialism for their anthropocentrism, ie. focusing on human existence as the source of values, and demands a higher standard for the humanity of man beyond the one that man is the measure of things, arguing that what is essential is not the human being, but being as a whole, and that humans have a responsibility to all existing things. Augusto Ponzio and Susan Petrilli's bioethics, on which Cobley bases much of his discussion, is founded on Sebeok's global semiotics and considers the individual life as connected with all other forms of life, thus subscribing to the Heideggerian position. Bioethics, or otherwise 'semio-ethics', has a different starting point from the eco-ethics of environmentalism, but subscribes to the same set of goals, being thus a newcomer to the environmentalist paradigm.

Jacques Fontanille and Didier Tsala-Effa are representative figures of the Greimasian School of Paris and in line with its theoretical approach rely heavily on the linguistics of Louis Hjelmslev, which they discuss extensively. Their paper represents a radical rethinking of the field of semiotics and gravitates around the methodological requirements for this task. They pose from the beginning the need to relate epistemology, theory and methodology, to link semiotics with anthropology as science of meaning and to account for the cultural singularity of the objects of study.

Their proposal is founded on an epistemological principle we find in Saussure (1971: 23), later called the 'law of relevance' (*loi de la pertinence*): the selection of a single point of view for the definition of a scientific field. In the second volume of their *Dictionnaire*, Algirdas Julien Greimas and Joseph Courtés observe that two tendencies are discernible in the current stage of research. The first is to accept that social facts are irreducible to purely semiotic ones and are studied by a set of special theories (such as sociology, economics, and political science), in which case semiotics would be compelled to simply invest stylistically these external realities. Although they do not approve of this choice, in the first volume of the *Dictionnaire* they write that there is no doubt that language can be *correlated* with the traditional social classes. In the same volume, in the entry on sociolect, they refer to social stratification, which they see as composed of classes, strata or social groupings, and consider them to be '*phénomènes extra-sémiotiques*' to which semiotic configurations *correspond*. However, they contrast this approach of a correlation between language and social classes in traditional societies to modern industrial societies, arguing that in the latter social stratification has shifted to forms of living (dress habits, culinary behaviour, dwelling, etc.), which is based on signifying practices appertaining to the domain of non-linguistic semiotics. This is also the position they opt for in the second volume of the *Dictionnaire*, in which they defend a sociosemiotics integrated within general semiotics, conceiving of the social in semiotic terms.

It seems obvious that the reason for this decision is the maintenance of the semiotic rele-

vance, since, as they explain in the first volume, seen from this angle, the correlation of semiotics with the social sciences would no longer result in an *interdisciplinary* socio-semiotics, the bringing together of two heterogeneous fields, but would remain pure semiotic *intertextuality*. They explicitly state that they choose methodological coherence over interdisciplinarity.¹² They argue that, given that communication activates the complex articulation of semiotic systems undertaken by competent subjects, enunciation (the production of semiotic texts) can be better studied through the enunciate (the texts themselves) than through random sociological variables (Greimas and Courtés 1979: *Sociolecte*, *Sociosémiotique*, and 1986: *Sociosémiotique*).¹³ The problem which Fontanille and Tsala-Effa have set themselves, then, is to elaborate a formal semiotic methodological framework for the study of ‘forms of life’.

Following the Saussurean principle of relevance (as Greimas himself always insisted), Fontanille and Tsala-Effa limit their analysis purely to the domain of *meaning*. They rely on Greimas’s semiotics, and Hjelmslev’s linguistic theory as the foundation of Greimasian semiotics (see also Ablali 2003: 55-95), and with these prerequisites they build a methodological proposal which they posit as the operational epicentre of semiotic analysis. The paper is divided into two main parts, the one exploring the interface between semiotics and linguistics, the other that between semiotics and anthropology.

In their search for a formal link between semiotic systems and cultural practices, Fontanille and Tsala-Effa turn to Hjelmslev’s form-substance division, which he extends to the concept of ‘purport’ (*matière*). They argue, following Hjelmslev, that this concept has two parallel meanings. In the case of expression, the linguistic substance of expression covers, on the one hand, the physical phenomenon preceding *langue*, the ontological substance or purport¹⁴ (as pointed out by Saussure, see ‘*matière plastique*’ – Saussure 1971: 155), and on the other the recognition of sounds. In the case of content, it covers the ontological purport of content, also pointed out by Saussure (see ‘*nébuleuse*’, ‘*idées confuses*’, ‘*pensée chaotique*’ – Saussure 1971: 155-156), as well as the content substance, gathering from the former whatever is relevant to have access to the form. The authors conclude that the form is not isolated from existential realities, which, as we shall see below, is of major importance for their argumentation.

An example from the semiotics of space may be helpful to understand the difference between ontological and semiotic substance. Imagine that you are walking in a street, seeing around you the urban environment. The latter as such is the ontological matter ‘out there’. However, you never record the whole environment, but, as a result of your interaction as a socially, culturally and even psychologically constituted person with individual characteristics, you conceive only certain parts of it. It is these parts that are ‘semiotised’ and, as the material vehicle of the urban signifier, become the urban expression substance (belonging to the physical level, which we shall discuss below).

The further development of the argumentation of Fontanille and Tsala-Effa also relies on Hjelmslev. They present crucial points of his theoretical approach discussed in *La stratification*

du langage (see Hjelmslev 1971, first published in 1954); given that they follow this text very closely, we feel a brief presentation of its main points will be helpful in following their argument.

Hjelmslev defines three levels (*niveaux*) of both the expression substance and the content substance. These hierarchically ordered levels are, from the higher to the lower: the level of social ('collective') appreciation, apperception or evaluation; the socio-biological level; and the physical level; all three precede the two *planes* (or *strata*) of the form. A closer scrutiny of these levels reveals their direct debt to Saussure. More specifically, Saussure's circuit of *parole* starts with a mental concept, a fact of consciousness (later to be defined as *signifié*), associated to an acoustic image (later, a *signifiant*), both of a psychic nature in the mind of person A; then it passes to a process that Saussure defines as physiological, focused on the organs of phonation, and continues with the physical process of the sound waves, reaching the ear of person B, where the process is repeated in reverse order (Saussure 1971: 27-29).

This is the point of departure for the three levels of Hjelmslev's substance (though all levels need not be present in all cases). He uses the same term as Saussure for the physical process (and specifies it as 'acoustic'); Saussure's physiological process Hjelmslev calls 'socio-biological'; and Saussure's auditory process is located on the level of social appreciation; the plane of the form is identical in nature for both of them. It seems that Hjelmslev was inspired by Saussure's presentation of the processes of expression and adopted them for the definition of the levels of content in a *symmetrical* manner (which is not an *a priori* necessity). Hjelmslev sees the relation between levels as syntagmatic: the lower level 'selects' or 'manifests', in the sense of *determines* (that is, a unilateral function between the substance as variable and the form as constant) the higher level, and the latter 'specifies' the former; the relation between the level of social appreciation and the plane of the form is also one of selection. The hierarchy for both substance strata is, from the higher to the lower: the level of social appreciation, the socio-biological level and the physical level.

When Hjelmslev (1971: 59) refers for the first time analytically to the levels of the phonic substance, he presents them in a different order, starting with the description of the 'physiological' (socio-biological) level, continuing with the description of the physical level and ending with the auditory description of the level of social appreciation. This order of description, which he alters in his final position (Hjelmslev 1971: mathematical diagram on p. 63), follows faithfully the Saussurean communication circuit. For Fontanille and Tsala-Effa, the multiple levels of organisation of the substance, which give meaning to the semiotic function, allows us to put semiotic analysis in perspective, and is also the foundation of its methodology.

These hierarchical levels and their relationships, for both the expression substance and the content substance, are shown in Figure 2, which represents a different visual rendering of Hjelmslev's diagram.

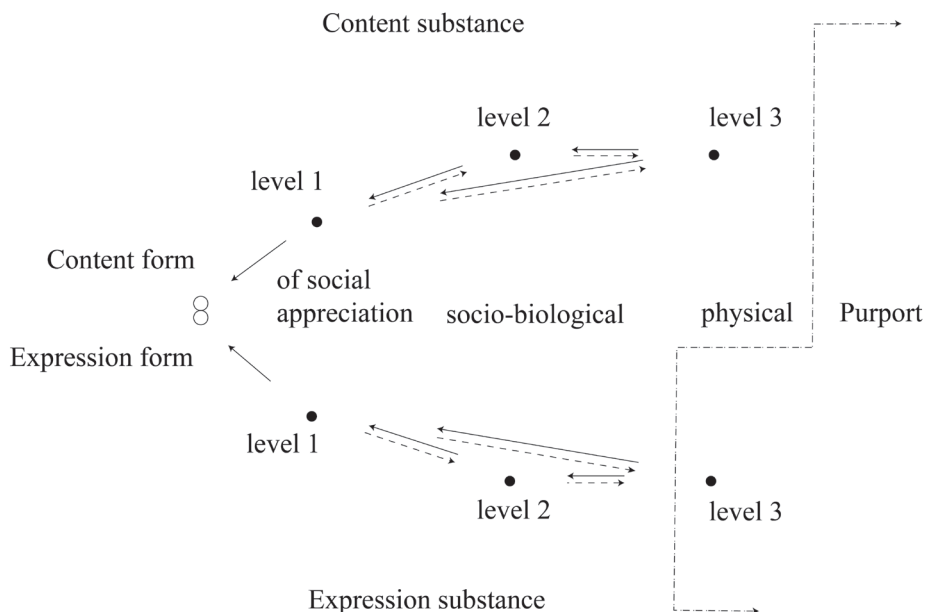


Figure 2. The three hierarchical levels of the substance stratum and their relationships. —→ : selection. ←--- : specification. -·-· : purport.

Substance levels of the expression stratum:

1. Level of social appreciation or apperception. For both the stratum of content and the stratum of expression, this is the primary level and the immediate semiotic substance linked to form. In linguistics it corresponds to the apperception of sounds and their auditory description. Hjelmslev gives as examples the description of sounds as *light vs dark, strong vs weak, long vs short*, etc.
2. Socio-biological level. This level, not always present, is physiological and in linguistics corresponds to the myokinetic and articulatory phonological description, in other words the description of distinctive traits. The examples given by Hjelmslev concern pronunciation and oppositions such as *voiced vs unvoiced, nasal vs oral, rounded vs unrounded*, etc.
3. Physical level. This is the acoustic level, implying the description of *physical* 'things'. It corresponds to the Saussurean description of sound waves and is studied, according to Hjelmslev (1961: 125), by the metasemiology of denotative semiotics.

Since this is philosophically an ontological description and linguistically belongs to phonetics, we conclude that the physical level of the substance of the expression *does not* concern signification. To come back to our example from the semiotics of space, the sound waves are

comparable to the materials from which space is built. Semiotics is concerned with the fact that a particular part of this material continuum is activated from the point of view of signification, not with the physical description of geographical space. As a result, Hjelmslev's expression substances do not all obey the same relevance. Although he explicitly states that all his substances are *semiotic* because they are under the domination of the form, he is well aware that the ontological purport is studied by non-linguistic sciences, leading 'to a recognition of a "form" essentially of the same sort as the linguistic "form", although of non-linguistic nature' (Hjelmslev 1961: 80).

Substance levels of the content stratum

1. Level of social appreciation or apperception. Hjelmslev considers this level as the first duty of the semiotician. It is concerned with the description of public opinion and collective evaluations, covering tradition and uses. Hjelmslev clarifies that this level, like the corresponding level of expression, concerns relatively naive appreciations, in other words, spontaneous valorisations or non-formally codified ideology. He gives as linguistic examples the adjectives 'big', 'small', 'good', 'bad'. At this level, for Hjelmslev, we find the *contact between linguistics* (and manifestly other semiotic fields) *and anthropology*. It is on this kind of interface between semiotics and anthropology that Fontanille and Tsala-Effa propose the constitution of a semiotics of practical situations.
2. Socio-biological level. This level concerns the description of the factors that act on the elements of appreciation. It seems that it can be identified with 'situation' and thus directly associated with socio-linguistics.
3. Physical level. This concerns the description of the cultural understanding of semantic units, which thus constitute a kind of semantic micro-set. Hjelmslev refers to units that can be physically described, such as the nouns 'horse', 'dog', 'mountain' (the example given by Fontanille and Tsala-Effa of the different cultural semantics of the elephant belongs to this level).

Hjelmslev qualifies all the levels as semiotic. As we saw, the three levels of the content substance are within the domain of semiotics, but only two of the levels of the expression substance, since the physical level should be excluded. These five levels, then, are *cultural* levels. In the case of natural language, the socio-biological level for both Saussure and Hjelmslev refers to the myokinetic and articulatory movements of speech; that is, it has as starting point a physiological process, though it is studied by a semiotic metalanguage. Perhaps the term '*socio-biological*' was used by Hjelmslev because of the physiological nature of this process, but it cannot be generalised, because this is not the case for other semiotic systems. For example, the semiotics of space is to a large extent anchored in physical space and has nothing to do with biology. The second component of '*socio-biological*' must originate from the physical level of expression and the obvious term is '*socio-physical*'.

Hjelmslev (1961: 106, 132, 133) defines in very general terms the concepts of 'selection'/'manifestation'/'determination' and 'specification' and does not give concrete examples of their application. Let us take some examples. Concerning the content stratum, Hjelmslev argues that the level of social appreciation 'selects' the content form. For Saussure, on the contrary, his *nébuleuse* is a passive substratum that comes to life only due to its fragmentation by semiosis: the form selects the substance. We can imagine a more complex situation, in which the *nébuleuse* is not passive but corresponds to the world of experience, which is a dynamic world virtually open to semiotisation. In such a case, the substance exerts *pressures* on the form and the latter *selects within* the context of this limitation.

Things are not symmetrical in the case of the expression stratum. The physical sound continuum is not experiential as is the content substance, but belongs to the physical world and culture uses it as an instrument for its own purposes: the physical expression substance does not 'select' the phonemic level, but inversely culture makes *cultural selections* from the physical sound continuum. The process from the physical to the socio-biological here is one of *transformation*. But these gaps in Hjelmslev's theory do not affect the approach of Fontanille and Tsala-Effa.

The anthropological part of Fontanille's and Tsala-Effa's paper relies heavily on Albert Piette's *anthropologie existentielle*, which Piette himself considers to be the empirical aspect of phenomenology; they also refer to Clifford Geertz's 'thick description'. Fontanille and Tsala-Effa agree with Piette's view on the need to focus not on the central and structured part of a task or interaction, which would reduce the diversity of cultural production, but on the part resisting this dominant structuration due to elements belonging to an external situation; it is assumed that, while this focusing reveals particular behavioural residues, it nonetheless manifests the *specificity* of each situation. For Fontanille and Tsala-Effa this phenomenon, in an existential perspective, reflects a mode of existence in a semiotic situation; the latter is of the nature of a phenomenological field, the object of study of which are the variations in intensity and extension of the inner world of the actors. We recognise here the two tensive exponents (*exposants tensifs*) of the modal apparatus (*dispositif modal*) of the semiotics of passion, which on a kind of continuum render the emotional condition of a subject. The authors call the central part of a practice (the structuration of the form) 'major' and the peripheral (the residues due to the substance) 'passive' and consider the focusing on the latter as implying a permutation of the actantial roles.

At this point, Fontanille and Tsala-Effa arrive at the core of their methodological proposal, simultaneously distancing themselves from the Greimasian canonical model which predated the semiotics of passion. The reason is that they consider each corpus studied as heterogeneous and not a priori definable but continuously enriched, and they include in it this passive mode as participating in the specific signification of a situation. They argue that, while current orthodoxy homogenises the corpus, eliminating the marks of subjectivity and enunciation,

this inclusion anchors the textual structure in a *unique and not reproducible situation*. Their aim with this methodology – and here they come back to Hjelmslev – is to sort out from the primary ontological purport the semiotic substance that is relevant for accessing the form.

The paper ends with the specialisation of this approach in an operational manner, by briefly presenting Fontanille's proposal for a set of 'methodological regimes' of semiosis corresponding to different planes of immanence. Each plane is composed of a structured form and a substance of a 'residual' nature, assumed by another plane in which it is analysed as form; these planes are not independent but articulated. We observe in this approach a new connection to Hjelmslev, who wrote: '*La substance semble donc demander une base d'analyse différente de celle exigée par la forme sémiotique propre ... les diverses substances peuvent bien présenter des structures très différentes entre elles*' but '*il y a une certaine correspondance de structure interne dans les différents niveaux*', and this relationship between neighbouring levels should follow a principle '*qui reste encore à trouver*' (Hjelmslev 1971: 68), and also: "substance" ... can only designate a whole that is in itself functional and that is related to a given "form" in a certain way' (1961: 80). It is these levels and their articulation that Fontanille and Tsala-Effa attempt to define with the typology that follows, including the formalisation of the residues, according to the rationale that the *explanatory* foundation of signification follows from conditions preceding its manifestation (see also Ablali 2003: 116). In this manner, *sociosemiotics* ceases to be a simple extension of mainstream semiotics and is theoretically and methodologically integrated within it.

The authors identify a first typology of these levels as signs-figures, texts-enunciates, objects-supports, practices-strategies and forms of life-modes of existence. They then regroup these into the categories of *figures* (signs), *works* (texts and objects), *flux* (practices and forms of life), and *existences* (modes of existence, anthropological modes).¹⁵

The proposal by Fontanille and Tsala-Effa is partly a response to the problem introduced to the Greimasian canonical model, based on the principle of discontinuity, by the semiotics of passion, founded on the contrary on that of continuity. Fontanille and Tsala-Effa turn to the substance and propose to interconnect forms and substances. In so doing, and given their focus on meaning, the orientation towards phenomenology was almost inevitable; especially considering that the roots of Greimasian semiotics have contacts with phenomenology (see also Ablali 2003: 119-137). Simultaneously, they approach enunciation no longer just through its traces in a text, but as a matter worthy of analysis *per se*, inseparable from the analysis of a text and an explanatory factor of it.

The paper by Rea Walldén, who is associated with the School of Thessaloniki, is linked to Fabbri's paper in discussing the general history of the 20th-century avant-gardes, in her case the cinematic avant-garde, which also links up with Pärn's interest in cinematic language. We have already encountered the issue of the 'extra-sémiotique' (or exo-semiotic), which, as we saw, is not taken into account by the School of Paris. On the contrary, Walldén introduces the

possibility of its legitimate connection to semiotic theory. In epistemological terms, does the maintenance of the semiotic relevance answer all issues raised by semiotics, or are there certain *semiotic* questions that cannot be answered by it?

Walldén starts from Saussure's formal approach to *langue*, which she considers an epistemological rupture due to his conception of semiotic arbitrariness. She points out that this is the background for Hjelmslev's fourfold organisation of semiotic systems into four strata: form of the content, substance of the content, form of the expression and substance of the expression; she indicates that the relation between the two levels of form is what Hjelmslev means by sign-function. Walldén suggests using the term 'material' for the term that Hjelmslev's English translator gives as 'purport' and, following Umberto Eco, points out that not all materials can be used as vehicles for all forms.

Walldén's paper focuses on the modes of semiotisation of the extra-semiotic, and she thus attempts to define the boundary between semiotic and extra-semiotic. Based on a possible interpretation of Hjelmslev and her own approach to cinematic theory, she proposes a very interesting reinterpretation of the composition of the levels of substance, beyond that of social appreciation, in regard to both content and expression. More specifically, Walldén argues that the distinction between the socio-biological and physical levels of both the content-plane and the expression-plane of the substance is philosophically loosely structured, because it is difficult to maintain a differentiation between action/mechanism and objects – in fact, whatever happens in human interaction with objects is action in situation – whence she suggests a wider interpretation of Hjelmslev's position. She points out that the socio-biological and the physical levels of the substance of both planes are not exclusively semiotic, but also have an extra-semiotic dimension. She also notes that the presentation by Hjelmslev of the physical level of the content-substance as semiotic is not faithful to his model (cf. the materiality of the corresponding expression level) and should not be taken literally; this level should correspond to the referent.

On the articulation of the semiotic with the extra-semiotic, Walldén also has recourse to Lagopoulos's theory of the three articulations of the semiotic with the 'exo-semiotic'. He calls 'exo-semiotic I' the articulation of 'production/derivation', the articulation of the material socio-economic process of production with the semiotic system, generating the universe of non-formalised, non-codified ideology (in Hjelmslev's terms, the ontological purport, culturally formed, before it becomes the level of the substance of social appreciation of the content plane), leading in turn to the main structural axes of the semiotic system. The 'exo-semiotic II' is the articulation of 'manifestation', that is, the articulation of the semiotic system with its material vehicle (which includes at least Hjelmslev's level 3 of the substance of the expression). The 'exo-semiotic III' is the 'parallel' articulation, that of the reference of the semiotic system to the external world. The research object of Walldén is the articulation of 'manifestation' and the influence of the extra-semiotic on the semiotic in the context of manifestation.

Walldén envisages a redoubling of Hjelmslev's socio-biological and physical levels of the substance of the expression, due to the difference in the communication circuit between the production and the reception of a message. With reference to the socio-biological level, she differentiates between productive and receptive mechanisms and she rightly believes that, even on the physical level of the material trace, there may be a difference between the two extremities of the communication circuit.

This is the general theoretical context within which Walldén constructs her semiotic theory of cinema, with the aim to focus on avant-garde cinema. Cinema is a special case of *langue*, acquiring its identity in the plane of expression from the use of moving images (since the 1930s, in combination with sound) and activating a set of different orders of complexity, of 'heterogeneity'. She proposes the following cinematic interpretation of the levels of the cinematic substance of expression:

1. Level of social appreciation (semiotic). The socially constituted perceptive image of moving light/shadows and sounds.
2. Socio-biological level (semiotic and extra-semiotic). This includes the processes of production and reception in their respective situations. The process of production in the production situation refers to the 'pre-filmic realm', that is, the object the camera registers, and to three phases, one from *repérage* to the *mise-en-scène* on location; the second consisting mainly of the shooting process, ie. the recording of image and sound with its corollary of mechanical and/or electronic equipment; and the third coinciding with the post-recording manipulations of the recorded material, such as editing (as both signifying and mechanical process) and sound-mixing, still using technological equipment. The process of reception in the reception situation also refers to three phases, among which the first two (which we can consider as extra-semiotic), the processes of copying and diffusion of the copies of the film, and its screening, once more accompanied by technological equipment, are not part of reception in the strict sense, which is not the case with the third phase, the (semiotic) reception of the film by the perception apparatuses of the audience.
3. Physical level (extra-semiotic). Light/shadows and sound waves registered on celluloid, or more recently on a hard disc.

The issue of the materiality of cinema is a principal concern of Walldén's theoretical approach, but she also examines it from the viewpoint of its relation to the concept of 'reality'. She points out that we owe to Saussure the de-essentialisation of the sign, since signification, as the relation of the form of the content with the form of the expression, is detached from reference and the idea of representation. On this basis, she argues that the concept of realism in the arts and literature, as a metaphysical conception of un-mediated access to the referent, cannot be defended. Walldén discusses the development of the views connecting cinema to

reality, from pure realism and the idea of giving the impression of realism to the attempt to minimise mediation and, finally, the display of the mediated and constructed nature of cinematic reality by the avant-garde.

Walldén observes that, in spite of the variety of definitions of avant-garde art, there is a strong relationship between form-oriented and politically-oriented definitions, since this art combines formal experimentations with political radicalism. She also points out that the first avant-garde is strongly connected to structuralism and the second avant-garde to poststructuralism. She presents the core of avant-gardist theory as the 'other' in cinema: the turn to the plane of expression, followed by the position that a radical form constitutes a radical content. The corollary of this attitude – which, as we understand, is an ideological position – is for Walldén the absorption of the extra-semiotic into the semiotic, which is a strategy for destroying the illusion of reference. This turn to the plane of expression resulted from a political and ethical – and thus still ideological – demand concerning the social function of art, to tell the truth and free the people, a demand that became a leading aesthetic principle. The same turn to the plane of expression led to materiality and a materialist ideology, a questioning of the naturalness of the world, and the prospect, ultimately revolutionary, of change.

Given that there have been theoretical disagreements concerning the definition of avant-garde cinema, Walldén proposes five types of criteria to define it; she argues that the first type in combination with one or more of the other types is the necessary condition for characterising a film as avant-garde. Essentially, her criteria can be divided into two groups. One group, semiotic criteria, includes (a) filmic/textual: innovative experimentation on form; (b) Cinematic/situational: ideological radicalism and awareness of the political significance of form, self-awareness of the filmmakers, and views of specialists and the public. A second group covers extra-semiotic criteria, namely alternative methods of production and distribution.

Walldén completes the image of avant-garde cinema with the presentation of some of its main strategies for calling attention to the expression-plane of the film, such as a special use of thematisation revealing the constructed nature of a film, the more or less radical breaking of common filmic conventions, the exploration of the potentialities of cinema, and the focusing on the interface between semiotic and extra-semiotic. This last strategy brings to the foreground a major epistemological issue in the field of semiotics: the *necessity* for semiotics to go beyond its relevance in certain cases in order to complete the investigation of its object. Walldén gives a set of examples of this strategy: focus on the semiotic potential of the recording instruments, display in the film of extra-semiotic events, creation of traces on the physical film strip, such as display of structural (for example, the grain) or accidental elements (for example, dirt, nails), intervention on the film strip (for example, by painting it). She adds interventions in later processes, including the reception of the film (for example, changing the shape or material of the screen, interference with projection, participation of the actors of the film). She also points out that even what we would consider as the wider material situation of

the film, namely cinematic working relations and institutions surrounding its production and diffusion (for example, single-hand film-making, co-operatives of production and distribution), are given a semiotic aspect.

These cinematic actions reflect a major strategy we also find in postmodern theory and practice, that is, the insertion within a text of a *metalanguage* on it. This metalanguage has two main axes, of which the first is *the extra-semiotic intervention of the film-maker aiming at semiotic effects* and the second *the semiotisation of extra-semiotic elements and interventions*, which, as Walldén notes, may in certain extreme cases fail and miss semiotisation altogether.

Walldén is concerned with the articulation of semiotics with extra-semiotic materiality in respect to the expression plane, but, as we saw, exactly the same issue can be raised for the content plane. This issue was addressed, for example, by Lucien Goldmann. As a first step he relates the internal structure of a '*structure significative*' (or text) to the larger structure englobing it. He argues that the description of the internal structure leads to the *comprehension* of the text, while its relation to the englobing structure allows its *explanation*.¹⁶ For Goldmann (1971: 152), '*Comprendre un phénomène c'est décrire sa structure et dégager sa signification. Expliquer un phénomène, c'est expliquer sa genèse à partir d'une fonctionnalité*' which is its function in a wider social context. Goldmann gives as example Pascal's *Pensées*, which can be inscribed as a partial structure within the larger intellectual structure of the Jansenist movement (21). So far, this operation remains within the semiotic relevance and can be related to Fontanille's and Tsala-Effa's forms of life. But then Goldmann takes a second step. The insertion of a text within its larger semiotic structure does not exhaust the procedure of explanation, because:

...un dialecticien ne peut pas faire de l'histoire des idées en dehors de l'histoire de la société ... c'est la catégorie de la structure significative qu'on ne comprend que par l'insertion dans une structure plus vaste et dans l'ensemble de l'histoire (162).

Raymond Williams's cultural materialism adopts a very similar viewpoint, showing that the relationship between the literary text and material society is neither necessarily expected nor simple. Studying the representation of the opposition between the city and the countryside in literature and drama from antiquity through the Middle Ages to seventeenth-century London, he argues that the general pattern is that of a rhetorical contrast: the surface characteristics of the countryside are idealised in the pastoral mode or, on the contrary, mocked in an anti-pastoral mode, while the city is seen as a place of corruption or of polite society, according to the case. Williams concludes that all these representations obscure the actual social relations of rural exploitation, and are part of an effort to avoid the problem of changing them: finally 'the town and country fiction served ... to promote superficial comparisons and to prevent real ones' (Williams 1973: 46-54).

The issue is, then, how to bridge the gap between semiotic systems and the historical, material world of social life. In this context, the decision to remain within the semiotic relevance is entirely legitimate, as is the sociosemiotic approach of Fontanille and Tsala-Effa, since it protects the necessary epistemological delimitation of the field. However, it does so by leaving outside semiotics issues relevant to semiotics, as the views of Wallden, Goldmann and Williams remind us.

Semiotics eventually encounters the material world and its material social processes, and the problem of the articulation of semiotics with it. The articulation of substance with form is an *internal* articulation, the articulation of extra-semiotic processes with semiotics is an *external* articulation. This is envisaged by Hjelmslev when he defines the *metasemiotic of connotative semiotics* as covering the 'largest parts' of sociological linguistics and Saussurean external linguistics, but also as an approach to which 'belongs the task of analyzing various – geographical and historical, political and social, sacral, psychological – content-purports' and to which contribute '[m]any special sciences, in the first place, presumably, sociology, ethnology and psychology' (Hjelmslev 1961: 125). We note, however, that this metasemiotic is doubly heterogeneous. First, the content-purports are not only material, such as geographical, but also cultural, such as sacral, and in any case to the extent that they are studied by other sciences they are not objects of semiotic theory. On the other hand, sociological linguistics and Saussurean external linguistics, and in general the comparable areas of any semiotics, are oriented towards the articulation of the extra-semiotic with the semiotic and thus are of direct semiotic interest.

There are questions that arise during semiotic analysis that cannot be answered in a satisfactory manner by semiotics, questions that frequently amount to a quest for social production or, as in Wallden's paper, the interaction between semiotic and extra-semiotic processes. When this occurs, the limitations due to relevance lead to slippery extrapolations from the semiotic text to its surroundings which result in the best case in partialness and in the worst case in misleading conclusions. The answer to these questions pushes semiotics to the external articulation of semiotic processes with extra-semiotic processes. We feel that this articulation can be epistemologically defined in the context of a holistic social theory such as Marxism, interrelating material socio-economic and political components as well as semiotic-ideological-cultural components into a coherent whole.

It has been argued, as we saw, that this articulation does not concern semiotics but only the social sciences. Our objection to such a position is that an articulation is a junction between two domains; it represents their overlapping, and as such it can be approached from two different directions: from the general-and-wider to the particular-and-narrower, or in the opposite direction. The social sciences are in a position to offer their contribution to this articulation from *above*, but they do so according to *their own* point of view, contributing to the explanation of the major semiotic axes structuring the semiotic. Semiotics, on the other

hand, proceeds to much finer, more detailed analyses, which lead to questions that the social sciences pose themselves only marginally if at all, and thus, starting from its *own* point of view, from *below*, approaches social phenomena differently. The sociological problematics of the semiotician can only partially be identified with those of the sociologist.

Hence we conclude in favour of a threefold semiotic approach: immanent semiotic analysis, the sociosemiotic analysis englobing it and the social semiotic analysis articulating the latter, from a semiotic perspective, with the material social processes, or otherwise Hjelmslev's metasemiotic of connotative semiotics.

NOTES

1 The dichotomy between the nomothetic and the idiographic position can reach such an importance as to define the epistemological nature of a scientific field or sub-field. Thus, for example, in human geography, the 'new geography' of the fifties and sixties, based on logical positivism, adopted a nomothetic concept of geography, which led to the construction of 'universal' mathematical models common to both human and physical geography. The high point of new geography came with systems theory, which sought a systematic geographical theory through the formulation of formal theories for every geographical organisation (Johnston et al. 1981: Positivism, Quantitative revolution). On the other hand, human geography continued to follow the traditional idiographic view, using a simple comparative method for the understanding of *particular* areas, without any systematic theory or theories. It became clear that the positivist metaphorical transposition of physical laws and models to the societal dynamics of human geography led to a dead end. In this field, theoretical regeneration came mainly through the Marxian paradigm, which rejects both universal laws and the idiographic approach and considers geographical space as produced from the specific socio-economic regularities of historically distinct social formations.

2 We may distinguish two broad categories of epistemological positions, realist and anti-realist theories. According to realist theories, it is possible to know the essence of the world. Scientific theories are considered to be true, at least approximately, in the sense that they correspond to an external reality; they are theories-reflection and their truth is truth-correspondence. On the other hand, anti-realist theories exclude truth-correspondence; this is also Pärn's view, who indicates that 'All observations are always mediated by language and knowledge'. There are two main tendencies within this category. The first is represented by mild anti-realism, for which, while reality cannot be directly re-presented, it nevertheless exerts pressures on the content of theories and thus the latter cannot be arbitrary. The other tendency is radical conventionalism, an extreme relativism that holds that science is purely and solely a construction, totally disconnected from reality; thus, observations do not pose any constraints on the researcher and he/

she is completely free in theory-building (Soler 2000: 43, 109-118, 126). We recognise in this extreme tendency the position of poststructuralism and postmodernism.

3 The specific status of metaphor is a major epistemological problem. The preference of the sciences is for biunivocal relationships between signifiers and signifieds. Of the approaches that defend the foundational nature of metaphors, an intermediary position is formulated by George Lakoff and Mark Johnson, who consider that the human conceptual system is essentially metaphorical, but metaphorical concepts are based on non-metaphorical concepts, which are due directly to experience, derive their meaning directly from it and may be considered as universals due to their strong physical anchoring (Lakoff and Johnson 1980: 195, 197, 198, 201). The primacy of metaphor is advanced by two philosophers, Paul Ricoeur, to whom many references are made by Pärn, and Jacques Derrida. They both argue that metaphor is our fundamental way of understanding reality, a view expressed by Derrida, at the very abstract level of deconstruction, as: 'la valeur du sens propre paraît plus problématique que jamais' (Derrida 1972: 368).

We believe that we should distinguish between philosophical and scientific views. Philosophy is global, while science focuses each time on a specific object of investigation. Thus, philosophical views may be used as a paradigmatic background, but they cannot be transferred as such to the scientific domain. Irrespectively, then, of the validity of the above philosophies on metaphor, in the scientific domain it is useful to make the distinction Pärn makes between rhetorical and analytical metaphors, as well as between purely metaphorical and more or less literal theoretical modelling.

4 We should, however, make a distinction between the use of mathematics as such and the borrowing of *specific* mathematical models. The former is not metaphorical, since mathematics like logic is a *passe-partout* instrument of thought. On the other hand, the transposition of physical laws and models to society is undoubtedly metaphorical.

5 This definition of semiotics is radically different from the Saussurean view, which considers semiotics as a *cultural* enterprise.

6 As we shall see below, the 'law of relevance', which allowed the constitution of Saussurean linguistics, means that European semiotics remains within the domain of signification and thus excludes the referent.

7 After this classification of 1903, Peirce, who was not satisfied with it, passed in 1904 to another classificatory scheme, which is far more extensive and in theory results in the generation of sign classes up to the tenth power of ten, although in practice this number greatly decreases. Peirce never established a fixed sign classification and his later estimates range from 66 classes up to ten billion.

8 For Saussurean semiotics the index is not a sign, because it involves a referent (Eco 1976: 115-116).

9 We are reasoning here on the basis of the types as delivered by the tree-structure, marginalising 'noises' due to the overlapping of his types, which, as we saw, Peirce himself recognised.

10 Sebeok first introduced zoosemiotics in 1965. Later, (Sebeok 1997) he called ecumenical

semiotics 'global semiotics', and the semiotics of culture 'anthroposemiotics', considering the latter as just one part of semiotics, the other part being 'biosemiotics'. He later extended biosemiotics to include 'phytosemiotics' and 'mycetosemiotics' (though he excluded semiophysics, which would have incorporated inorganic matter).

11 Piaget (1968: 75-77, 89-100) disagrees with Noam Chomsky's view on the innate nature of his formal linguistic transformations and counter-proposes that they presuppose the formation of the sensory-motor intelligence. He also disagrees with Lévi-Strauss's invariant 'esprit humain', the 'unconscious activity of the spirit', on the grounds that the spirit is not a collection of permanent schemes, but the open product of a continuous auto-construction.

12 Greimas and Courtés's position leaves us with a contradiction, because, they state, on the one hand that in traditional societies the correlation of the semiotic with the social classes is possible, hence, of course, the need for an epistemology of the *articulation* between the semiotic and the extra-semiotic, but on the other that in modern societies the sociological phenomena of social stratification have shifted to signifying practices, maintaining in this second case the epistemological position of the semiotic relevance. Should we have two different epistemological semiotic approaches, one 'interdisciplinary' for traditional societies and one 'intertextual' for modern societies?

13 A few years later, Courtés expressed similar view concerning the relation between semiotics and the social sciences. He observes that there are two equally legitimate approaches having as object enunciation. The first emphasises the external – social, economic, religious, etc. – conditions of production of an enunciate and explains through them its composition and characteristics; this is, for Courtés, the 'secondary signification' of a text. He adopts the contrary view that enunciation is a purely semiotic instance, which is logically presupposed by and incorporated as traces within the enunciate. According to him, this maximum extension of the semiotic level delivers the 'primary signification' of the text. He observes that the production of a text is something that involves all the human sciences, but '*nous choisissons de ne point sortir du texte étudié, nous interdisant méthodologiquement de chercher ailleurs ... la source, l'origine*'. This view, he believes, is much more modest and limited than the aim of the human sciences to reach a 'deeper' level of analysis (Courtés 1991: 245-246).

14 In philosophy, ontology is a branch of metaphysics dealing with the nature of 'things' and for European semiotics the latter are only accessible through metalinguistic semiotic systems.

15 We believe that the last two are closely comparable to the semiotic processes of Pierre Bourdieu's *habitus* (see, for example, Bourdieu 1971).

16 These key terms are given a different meaning by Driss Ablali (2003: 119-137), when he compares Greimasian semiotics with Paul Ricoeur's hermeneutics. He considers the approach of Greimas as methodologically focused on explanation, though without excluding comprehension, and the approach of Ricoeur as reversing the relationship between the two terms. Goldmann combines Marxism with Piaget's genetic structuralism.

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